

and not far from the little village of Port Margot. It is not necessary that you visit that particular locality, for nearly anywhere in a tropical forest you may see the same thing taking place. In this instance the ungrateful plant was *Clusia*, but there are other plants \* which gain their ends in the same way. No wonder that in the English-speaking portions of the West Indies this plant has received the name of the "Scotch attorney," for when it once obtains a hold it never lets go while there is anything to be gained.

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## REVIEWS

### "Gray's Manual," Seventh Edition †

The long anticipated seventh edition of "Gray's Manual" has appeared, and proves to be an attractive and carefully prepared work of 926 pages, quite copiously illustrated with small but generally clear and accurate figures scattered throughout the text. The arrangement followed is that of Engler & Prantl, and the plan of prefacing the treatment of the species in a genus with a specific key is generally adopted. The authors, or editors as they designate themselves, Professors B. L. Robinson and M. L. Fernald, of Harvard University, are to be cordially and sincerely congratulated on the successful termination of their work, which not only exhibits on every page the learning for which the authors are so well known, but shows every evidence of painstaking care and an evident desire to embody the latest researches

\* The last report of the Missouri Botanical Garden has an illustrated paper on "The Florida Strangling Figs" by Dr. Ernst A. Bessey. Two species of *Ficus* are described; one (*F. aurea*) having the curious "habit of beginning its growth as an epiphyte and later becoming terrestrial by sending down numerous slender roots which eventually thicken and fuse together, finally wholly surrounding and strangling the host." The seeds of the same species require light in order to germinate; this peculiarity is no doubt related to its epiphytic habit. — EDITOR.

† Gray's New Manual of Botany (Seventh Edition — Illustrated). A Handbook of the Flowering Plants and Ferns of the Central and Northeastern United States and adjacent Canada. Rearranged and extensively revised by Benjamin Lincoln Robinson and Merritt Lyndon Fernald. Pp. 926. f. 1-1036. American Book Company, New York, 1908. \$2.50. [Issued September 18.]

in the flora of the region covered. The belief which has prevailed in botanical circles in the past, whether rightly or wrongly, that propositions put forward by others would not be investigated solely on their merits by the Harvard botanists — a belief which the sixth edition of Gray's Manual unfortunately did so much to foster — will now happily have to disappear and be but a memory of the days that were.

By the above statements the writer does not, of course, mean that there are not many features in this edition of "Gray's Manual" open to criticism and strong differences of opinion, and no one will probably admit this more readily than the learned authors themselves. The first and probably the most obvious question, which will occur to any one after a careful perusal of this work, is why it is called "Gray's Manual." One can understand that as a commercial proposition it may have been deemed advisable to conserve the value of the advertising given to Gray's works in the past. Apart from this, however, there is so little left of the text of the old Gray's Manual, and the entire arrangement, nomenclature, style, type, and even cover of the book, have been so radically and fundamentally changed, that it seems to the writer a misuse of terms to speak of this work as a new edition of Gray's Manual. Indeed, so vast are the changes that the writer feels called upon to offer his condolences to those Bostonians of the old school for whom even the phraseology of the former editions of Gray's Manual has been almost sacred. In the present work they will find so much that is new that he is almost afraid they will be compelled to fall back on Dr. Britton's Manual to be again on familiar ground! To be serious, however, the authors are doing themselves an injustice in not calling the work what it really is. It is so nearly a new work that in accuracy it should be called "Robinson & Fernald's Manual." If the authors are too modest for this, calling it "Britton's Manual — Harvard Edition," would be more accurate than using the name which has been given, as in every respect it much more resembles Dr. Britton's work than it does Dr. Gray's.

In matters of nomenclature, the work unfortunately follows the arbitrary and unjust Vienna Code, not because the learned

authors believe in that code, but because they hope to keep American botany from an alleged "provincialism" in not following it. Americans in general, and Bostonians in particular, have in times past shown pronounced evidences of "provincialism" when dealing with certain European ideas of right and wrong, and the writer for one hopes that a similar "provincialism" will be shown in dealing with the Vienna Code. To select arbitrarily several hundred generic names as that Code does, and refuse to recognize them, although entitled to recognition under every rule of right and justice, is to the writer one of the most indefensible of propositions. The writer, of course, knows that the rule referred to is not one for which the authors of the work under review are responsible. He only hopes that, with the liberal mind they have shown in dealing with other questions, they will in the future join other American botanists in repudiating it.

Outside of the changes made necessary by recent discoveries, a very large percentage of the differences between this manual and other manuals of recent years, arises from this arbitrary rejection of certain generic names. The rejection of the rule "once a synonym, always a synonym" accounts for a small percentage of the differences, and the remaining arise almost entirely from what might be called a "conservative" generic treatment. Indeed, the generic treatment is rather disappointing. The authors have not given us their own ideas, as they have in the case of species, but have followed too closely the ideas of others. The same liberal treatment which the authors have applied to species would, I am sure, produce different results from those here given, when applied to genera.

While, as heretofore stated, the plan has generally been adopted of prefacing the treatment of species in a genus with a specific key, yet in many cases the plan of scattering a key through the specific descriptions has been followed. The result is a lack of uniformity, which at times is disconcerting. This matter, however, is of minor importance and detracts but little from the merits of the work.

So much, then, for the general features of this manual. It now remains for the reviewer to give a statement of the impressions produced on him by various portions of the work.

The treatment of the ferns and fern-allies naturally shows an improvement over the treatment given them in the sixth edition, but one is left wondering what the authors conceive to be the requirements for genera in these groups. Such closely allied genera as *Cheilanthes* and *Notholaena*, *Pellaea* and *Cryptogramma*, and *Asplenium* and *Camptosorus* gain recognition. On the other hand, *Athyrium*, now usually recognized as a legitimate genus, is not given a place in the work, and *Onoclea* and *Woodwardia* are made up of most heterogenous elements. The writer, of course, would not venture even to suspect an element of provincialism in the continued use of *Aspidium*, but does with becoming temerity venture to suggest the expenditure of some of the income from the sale of this work in the purchase of some genuine Dicksonias! Our North American plant so persistently referred to these tree-ferns may then be allowed to take its legitimate position. Again it may be suggested that while the treatment of *Lycopodium* shows a clear understanding of the New England species, the coastal forms of the *inundatum-alopecuroides* group plainly need further study.

One is glad, indeed, to see *Asplenium ebenoides* definitely characterized as a hybrid, and notes with satisfaction the more numerous family groups now recognized. *Isoetes* and *Equisetum* have been carefully elaborated by Mr. Eaton, and the resulting arrangement is by far the best we have yet had for these variable and difficult plants. How saddening it is to remember that Mr. Eaton passed away almost simultaneously with the appearance of the results of his labors on the groups he loved so well.

Coming to the monocotyledons, one of the first genera which will strike the reader is *Potamogeton*. The artificial key here produced is apparently a very serviceable one and by not relying too exclusively on winter buds and glands avoids being too technical — a defect which makes Dr. Morong's key so difficult for the field worker to handle. Many changes in nomenclature, too, are made in this group, but these changes as well as the changes required in *Sparganium*, *Sagittaria*, and other genera placed early in the monocotyledonous series will generally commend themselves.

The grasses are handled in a masterly way by Prof. A. S. Hitchcock. He shows no reluctance to recognize recently proposed or revived genera, which commend themselves to his mind, and as a result we have a general arrangement, which will surely be regarded highly by all agrostologists. How greatly altered *Panicum* has become through recent study is shown by the fact that what in the sixth edition was treated as one genus with 25 species and about five varieties has here become six genera with 86 species and four varieties. Other genera, too, show very marked changes, but, of course, nothing like this.

The Cyperaceae also show the influence of new ideas, and in comparing the pages dealing with such genera as *Scirpus* and *Eriophorum* with the earlier editions, one unfamiliar with the recent history of the groups would scarcely believe the two editions represented studies in the same territory. *Carex* has been entirely changed, and very little, if any, of Professor Bailey's earlier treatment survives. A very elaborate and useful but not always accurate artificial key covering fourteen pages is one of the noteworthy features, and the time-honored division into *Vignea* and *Eucarex* is maintained. The statement on page 209, that the distigmatic species of *Eucarex* always have peduncled spikes, is valueless if it includes the terminal spike; and is incorrect, if it refers to the lateral forms of *Carex stricta* and *Carex Goodenovii*, as well as certain species not treated which are exceptions. The treatment of the subgenus *Vignea* is in the opinion of the writer the best ever given our eastern North American species. On the other hand, the treatment of *Eucarex* is less satisfactory, that of *Carex tetanica* and *Carex laxiflora* and their allies being especially weak. To discover errors in the key one might try to name *Carex flava* or *Carex acutiformis* by it.

The remaining groups of the monocotyledons also exhibit in many places the changes made requisite by recent studies. *Juncus* is credited with considerably fewer species disguised as varieties than formerly, and in *Sisyrinchium* the discriminating studies of Mr. Bicknell are rather closely followed. In passing it may be noted that the description of the plant called *Iris hexagona* is evidently based on specimens of the very different *Iris*

*foliosa*, the former being a tall plant with flowers conspicuously displayed like *Iris versicolor*, the latter a low plant with flowers hidden among the leaves. The treatment of the Orchidaceae is a disappointment, and but two of the views expressed in recent works by Dr. Rydberg are adopted, and these to a very small extent. His views may well not all be correct, but to reject them almost *in toto* is a fairly sure indication that they have not been given the consideration they deserve.

Of the earlier dicotyledonous families, the Salicaceae show the greatest changes and have undoubtedly been the most carefully studied. All the hickories but two receive names under *Carya* different from those in the sixth edition. Again we congratulate the staid Bostonians, as we also do on that pet of the Vienna rules, "*Maclura pomifera*", formed by arbitrarily ruling out Rafinesque's genus *Toxylon*, in favor of Nuttall's later *Maclura*, but recognizing as good Rafinesque's specific name published at the same time as his genus and tacking it on to Nuttall's genus. Verily a case of the tail being better than the head! *Polygonum* shows many changes, the results of Dr. Small's and Professor Robinson's studies being incorporated. Among the smaller genera the treatment of *Asarum* is noticeably deficient.

In general it may be said that so many changes have not been found necessary in the latter half of the work as in the first half, and many more of Dr. Gray's ideas continue to be there incorporated. Several groups, however, in which activity has been great in recent years are entirely changed. Of course, the most noticeable example of this is *Crataegus*, in which Mr. Eggleston, who professedly treats the group in a tentative way only, has done most excellent work. His group divisions apparently represent work of the most thorough character and the species he recognizes represent something more than individual trees. In glancing over the treatment of *Rubus*, however, one feels much inclined to join in the evident opinion of the editors that much more work must be done to understand the genus. It is evident, too, that the different groups of blackberries have been given a very uneven treatment.

*Viola* shows the result of the long continued and scholarly

study placed upon it by President Brainerd. *Solidago* has been carefully elaborated as far as the New England species are concerned, but the treatment of species not represented in New England is deficient in several respects. Similarly, Dr. Greenman's treatment of eastern *Senecios* is satisfactory, but he has not met so well the difficulties encountered in a study of the southwestern forms. The number of *Asters* recognized has been enlarged from 54 to 59 with many additional varieties; but, even with these additions, there are forms worthy of recognition which are not referred to.

Other features of this interesting work might well be discussed and many specific criticisms made, but space forbids. Omitted species of great distinctness are readily called to mind. Many of these could have been obtained by the authors for examination upon request. The value of the work is lessened and the botanical world has lost because they have failed to make the request. Many synonyms used in recent works are not referred to. But putting these and other points open to unfavorable criticism aside, the writer feels that he has had before him for examination a work of great merit. He has been both pleasantly and agreeably surprised by it, and he feels sure that it will be a welcome addition to the working equipment of all American botanists who are not too strongly committed to the old order of things, — the order exemplified by the sixth edition.

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## PROCEEDINGS OF THE CLUB

OCTOBER 13, 1908

The first meeting of the season, held at the Museum of Natural History, was called to order at 8:20 by Dr. Howe in the absence of other officers. Mr. George V. Nash was elected chairman. There were fourteen persons present. The minutes for May 27, 1908 were read and approved. The nominations of Mr. Michael Levine and Dr. Raymond H. Pond for membership in the Club were presented. The resignation of Miss Aurelia B. Crane to